E 100   105   110   115   120   125   130   135   140   145   150   155   160 E

N 35

30

25

20

15

10

EQ

S 5

TYPHOON RUBY
BEST TRACK TC-23W
20 OCT-28 OCT 88
MAX SFC WIND 125KT
MINIMUM SLP 916MB

LEGEND

⊥	6-HOUR BEST TRACK POSIT
A	SPEED OF MOVEMENT
B	INTENSITY
C	POSITION AT XX/0000Z
○○○○○○	TROPICAL DISTURBANCE
••••••	TROPICAL DEPRESSION
- - - -	TROPICAL STORM
——	TYPHOON
◆	SUPER TYPHOON START
◇	SUPER TYPHOON END
✛✛✛	EXTRATROPICAL
✦✦✦	SUBTROPICAL
***	DISSIPATING STAGE
F	FIRST WARNING ISSUED
L	LAST WARNING ISSUED

126

L - 28/18Z

F - 21/18Z

TCFA

ABPW

21C

22

23

24

25

27   28

28

25   30   35   45   50   55   60   60   65   65   85

8   9   7   8   7   7   9   7   8   8   5   4   3

65   65

65   8   14   14   12   14   15   14   16   14   14   13   10   8   6   6   5A

70   80   120   125   110   100   85   90   80   70   65   60   50   45   40   35B

TYPHOON RUBY (23W)

The last of four typhoons to develop in the western North Pacific during October, Ruby became the fifth tropical cyclone to hit the Philippine Islands in 1988.

On 20 October, as Typhoon Pat (22W) approached the Philippine Islands, Ruby formed to the east in the Philippine Sea. The Significant Tropical Weather Advisory was reissued at 201800Z to include this new disturbance. Increased central convection and organization warranted a Tropical Cyclone Formation Alert at 210430Z and the first warning at 211200Z.

Ruby assumed the track of a "straight runner" and continued to intensify. At 240600Z, as it neared land, Ruby developed a 15 nm (28 km) diameter eye and reached its peak intensity of 125 kt (64 m/sec) at 241200Z. The eye persisted for twelve hours before Ruby tracked into the mountainous terrain of central Luzon (Figure 3-23-1).

Like most tropical cyclones that track over the Philippine Islands, Ruby weakened significantly as it moved across Luzon; however, it was near super typhoon intensity shortly before it made landfall. The result was widespread damage and loss of life. More than three hundred people were killed, including over 150 who drowned when the ferry DONA MARILYN capsized at sea 300 nm (556 km) southeast of Manila, and over 470,000 people
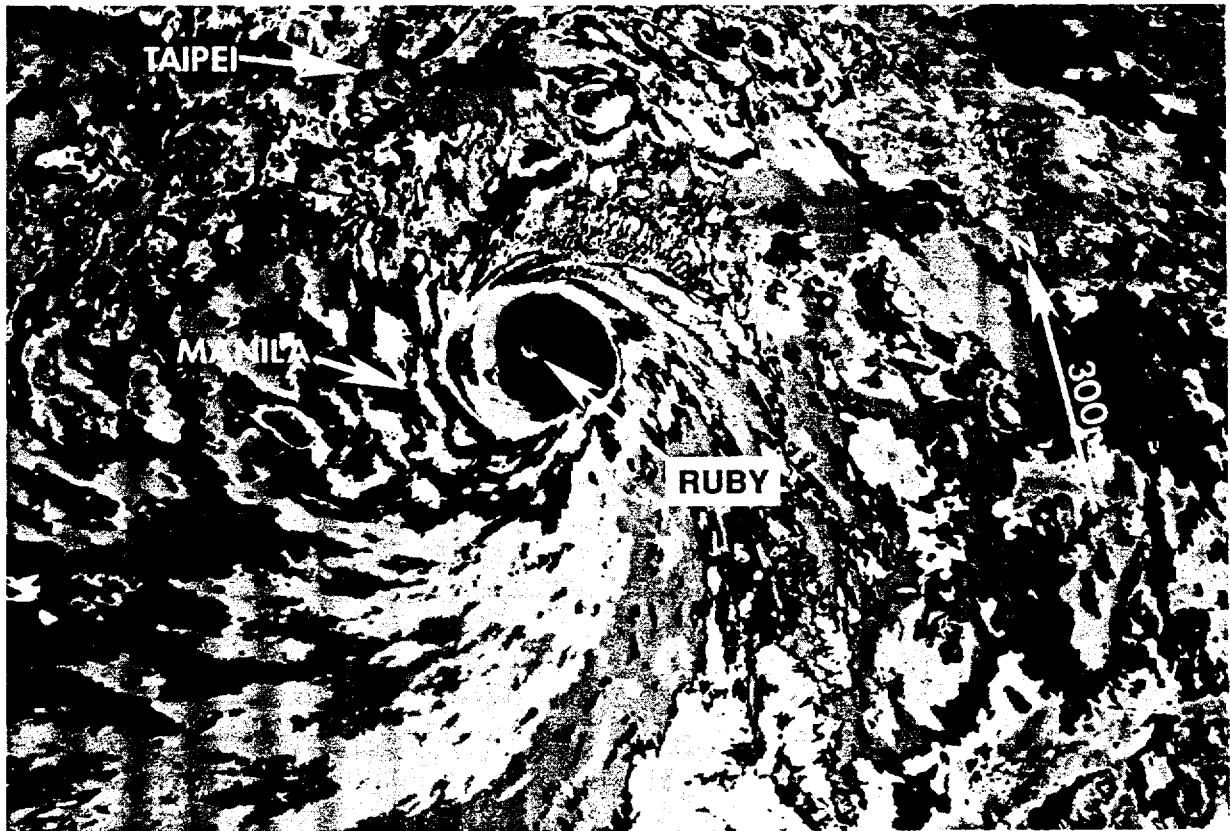

Figure 3-23-1. Ruby, shortly before reaching its peak intensity and making landfall over central Luzon (241000Z October DMSP infrared imagery).
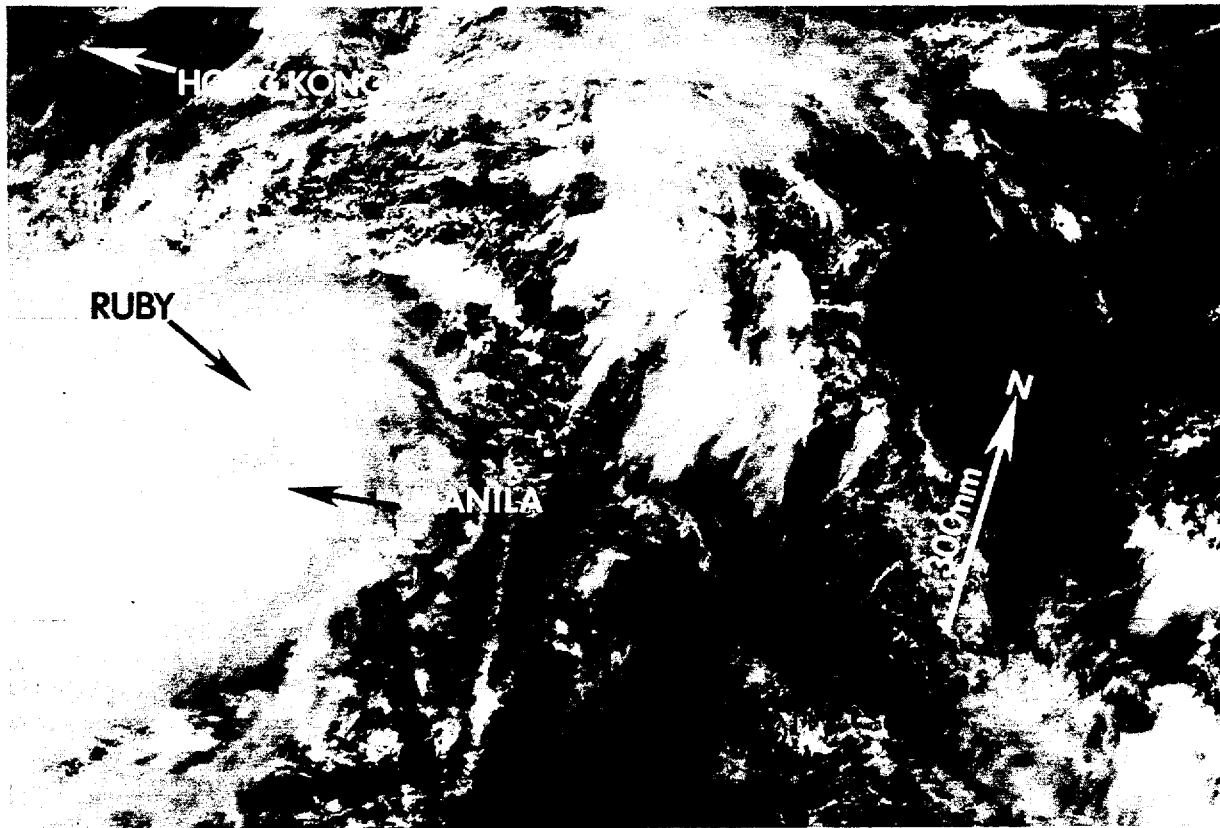
127

Figure 3-23-2. Convective bands brought prolonged torrential rains, high winds and hazardous surf conditions to western Luzon, as Ruby slowly entered the South China Sea (250048Z October DMSP visual imagery).

were left homeless. Also the freighter JET ANN FIVE sank near Bohol Island in the southern Philippines after encountering rough seas from Typhoon Ruby.

Entering the South China Sea at 250300Z, Ruby (Figure 3-23-2) slowed. As a result of Ruby's slow departure from Luzon, Subic Bay Naval Base and Clark Air Base received their worst weather following the passage of the typhoon's center. Bands of wind and rain from the southwest slammed into western Luzon, causing torrential downpours and strong, gusty winds. Peak gusts recorded were 69 kt (36 m/sec) at Subic Bay (Figure 3-23-3) and 46 kt (24 m/sec) at Clark Air Base.

(These were the strongest winds reported at Clark Air Base since Super Typhoon Rita (1978) produced gusts to 58 kt (30 m/sec).)

Ruby then began to track toward the island of Hainan and made landfall at 280400Z. Interaction with the mountainous terrain of Hainan caused the tropical cyclone to weaken. The final warning was issued at 281800Z, after satellite imagery indicated the absence of central convection. Although Ruby's circulation dissipated over water, heavy rainshowers caused flash floods in northern Vietnam that killed at least 100 people, left thousands homeless and destroyed over 300,000 tons of agricultural produce.

128

Figure 3-23-3. Ruby's high winds caused widespread damage. This tree toppled into a housing unit. (Photo courtesy of the Naval Oceanography Command Facility, Cubi Point, Republic of the Philippines.)